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How highway transport  
cooperates

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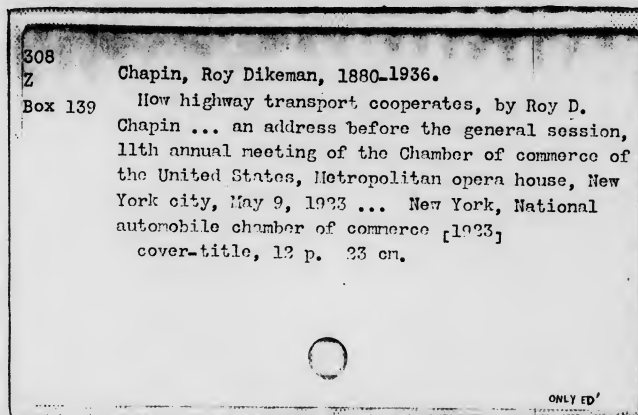
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# How Highway Transport Cooperates

by

ROY D. CHAPIN

Vice-President, National Automobile Chamber of Commerce  
Chairman of the Board, Hudson Motor Car Company

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An Address before the General Session, 11th  
Annual Meeting of the Chamber of Commerce  
of the United States, Metropolitan Opera House,  
New York City, May 9, 1923

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*Competition between motor and rail transport is negligible.*

*Short haul traffic is the economic field for the motor vehicle, and is costly for the railroad.*

*Motor transport can relieve costly rail terminal congestion in large cities.*

*Electric lines are extending their facilities through use of buses.*

*Inter-relation of all types of transportation means better business for each, and better service to the public.*

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NATIONAL AUTOMOBILE CHAMBER OF COMMERCE  
366 Madison Avenue, New York

*Transportation is the basis of the whole structure of business activity.*

---

*Our task is to evaluate the service which railway, electric, waterway and motor agencies can best render in the movement of passengers and freight.*

---

*The field of the motor truck is essentially supplementary, usually for short hauls.*

---

*Motor vehicles, in supplementing electric railway and waterway service only, are affording the public completed transportation.*

---

*The motor truck makes possible new extensions of our waterways, serving as shuttle between water and rail-heads.*

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*With the aid of motor trucks, railroads need no longer come into center of city for freight terminals, but can move terminals farther out into less expensive districts, thereby lessening fixed and operating costs and relieving the congestion of crowded down-town streets.*

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*Politics should be eliminated from highway work.*

---

*Two-thirds of motor truck haulage in Connecticut is transported under 30 miles; 81% of the movement has its origin in the state and 84% has its destination there.*

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*The major and more profitable part of rail tonnage is in carload lots of heavy staple products, while the motor truck mainly hauls less-than-carload lots of the more perishable products.*

## How Highway Transport Cooperates

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ROY D. CHAPIN

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WE of America stand in the transition stage of the greatest development of transportation in all of the history of the world.

In the past it has been said that transportation has been the pawn of kings in shaping the course of empires.

Today it has become the tool of the individual in working out the problem of the family.

The twelve million and a half motor vehicles owned by Americans are the agency for a peaceful revolution no less potent than those more warlike symbols of progress of the past.

New forces have been created through its use which are bringing us to new customs. Tradition bows to the genius of the present. Another instrument has been devised for the advancement of our civilization.

### What Does This Agency Mean?

So far reaching are the implications of this new development that before we can speak of its correlation with other agencies, we must obtain some understanding of the essential purposes to which its use is being directed.

The day has gone when we can look upon the vehicle on the highways as a separate entity. We must go back of the scenes and find out why it is there, what it is doing and its effect upon those of us who may never use it.

The motor vehicle is the answer of mechanical genius to the inherent demand for individual transport. All of us want to travel, to meet and converse with our fellow beings, to see new things.

The owner of the motor car can be a Columbus, a Balboa, a Marco Polo, a Livingstone. Alone, or with his family, he can daily

penetrate into new countries. A new vista has been opened before him which suddenly has made life preeminently worth while.

### **Influences Many and Profound**

If the motor car met only this one universal human demand, its use would be justified. But it has done more.

How many of us have consciously observed the influence which the motor, be it passenger car or truck, has already had upon our lives?

The farmer chained in isolation like Prometheus of old has had his shackles struck down by the arrowlike flight of this modern weapon of Hercules.

The man toiling in the city, his eyes intent upon a distant day when he might retire to the pleasures of country life, sees the goal placed immediately before him.

Old inhibitions are blotted out. We look forward to an existence which, possessing all the advantages of the city, carries with it the flavor of the open country.

Can we doubt but that as we gain physically, our mental processes will be quickened, our contacts broadened?

### **New Emphasis Placed on Individual Happiness**

How many sitting in this audience have noticed the growth of the small community center, the chain store, the neighborhood movie, the branch bank? Would these centers have been possible fifteen years ago? Certainly they did not exist then. Do they not carry with them indications of great changes in our ways of life?

How many have paused to reflect upon the actual saving in life made possible by this new transportation, particularly in agricultural areas? Not only has the physician's zone of service been immeasurably broadened, but the hospital has been made far more accessible.

How many have noted the perceptible shift in our rural educational methods due to the ease with which the modern motor bus picks up the children for miles around and carries them to the central consolidated school?

Yet these are but a few of the many sociological changes which are taking place on all sides of us and which have only been made possible by the advent of this new unity of transportation.

### **Business Quickened; Labor Given Employment**

If we turn to the economics of this movement, we are perhaps on more familiar ground. The influence which has already been

exerted in quickening industrial enterprise, in creating new business for other transport carriers, in providing labor with an immense new reservoir of employment in the manufacture of the vehicle, the highways, and of the materials used, is readily discernible and easily understood.

The milk which we drink at the breakfast table is the fresher because of the motor delivery back of it. The emergency call for food to take care of the unexpected guest is met by the grocery store truck.

From the new-born babe just leaving the hospital, to him who is setting forth on the last journey, we all travel today at some time on motorized wheels, and whether we know it or not, those wheels are quickening the social and economic pulse of America

### **Success No Accident of Circumstance**

It is no accident of circumstance, then, which has made the motor industry the first in value of finished products in the United States. Not only is it the largest exporter of finished products but it is the third largest manufacturing freight user of our rail lines.

It is simply the plain, homely fact that the motor car meets a universal human need, and, because it does, it has become as President Harding has termed it "an indispensable instrument in our social, political and industrial life."

It is important that we understand these facts before we attempt to analyze highway transport in relation to other agencies of transportation.

### **Unwise Enactments May Affect Rights of Masses**

It is doubly important that we understand the place of the motor vehicle before we attempt regulation, taxation, or any of the other restrictive measures which are a part and parcel of government. Important, because unless we use care we may defeat a human need, we may deny to the masses their rights as individuals to personal transportation.

From a broader standpoint, we may even interfere with the constant welding process of communication which is serving to bind our great nation into a homogeneous whole.

These are dangers which the thinking student of political science will recognize and will want to avoid. Certainly, they provide problems which should not be settled save after mature deliberation and with a knowledge of all of the facts.

### Service to Public the Function of Transport

Turning, then, to the immediate question before us today, that of a coordination of all of our facilities of transportation, it seems to me that the one dominant theme which we must keep in mind at all times is *service*.

The final test of the progress of the individual, of an organization, of government itself, is the ability to serve the public honestly and efficiently. None can long succeed who fails to keep to that standard of effort.

In any discussion of transportation, service must be particularly emphasized because, after all, the only function which any agency of transportation performs and the only interest which the public has in it is service. The form or type of carrier used is secondary to the demand for efficient and completed transportation. Even cost is secondary because, after all, cost is but an element in service, and efficient service is always the least costly in the long run.

### Public Concerned Only With Efficient Agency

The question raised by the average citizen when he thinks of transportation is simply this—"what is the best way to go from where I am to where I want to be?"

The answer to that question is the only one which will be accepted in the long run by the American public.

No country in the world has the possibilities for efficient, modern transportation which we have. We must realize upon those possibilities.

### Facilities Have Lagged Behind Needs

Our one great difficulty has been that we have grown at such an astonishing rate that our facilities have lagged far behind.

Thus, in the motor field, while from 1910 to 1922 there has been an increase of 2,450 per cent in the number of vehicles, and a far greater increase in mileage traveled and tonnage hauled, all of our efforts have failed to provide an adequate increase in our roadbed facilities in the same period and at our present rate it will be ten years before the United States can hope to arrive at a rounded out highway system.

The amazing increase in our railroad tonnage requires no statistics. Visual evidence is found on every side. Yet for those who like the testimony of fact we read a statement from *Railway Age* which shows that while freight cars have been increased in number by 23 per cent in the last ten years, and the aggregate tractive power

of locomotives forty-one per cent, the country is offering the railroads sixty per cent more business than ever before.

### Country's Prosperity Depends Upon Transportation

Since the whole structure of business activity rests upon transportation, it is evident that we must use those facilities which we have in the most efficient way, unless the country is to suffer from tremendous losses.

It is apparent, then, that what we should be concerned with is a definite effort to make each of the systems of transportation complementary to the other. Duplication is not desirable if wasteful. There is a field for each form and the public will demand that form which can give *the best service*.

Generally speaking, transportation may be divided into long and short hauls, each of which presents problems mutual to railway, electric, water and motor agencies. A third question, that of short haulage within congested terminal areas, appears to be restricted to the motor and rail. Our task is to evaluate the service each agency can render the public in these fields. And in this discussion, while the airplane has not been included, it is time we also recognize this new means of super-speed transport service.

The most impressive fact which any survey brings out is that the field of the motor truck is essentially supplementary, usually for short hauls, and conversely that the cost of railroad haulage decreases per mile as the length of the trip is increased.

### Motor Haulage Largely Over Shorter Distances

Surveys made by the U. S. Bureau of Public Roads and the state highway department show that of the total motor truck traffic in Connecticut over a given period, 36 per cent was hauled a distance of but one to nine miles; 31 per cent was hauled from ten to twenty-nine miles; 19 per cent was hauled from thirty to sixty-nine miles, and the remainder, around 14 per cent, was hauled more than seventy miles.

If we go a step farther, we find that 81 per cent of the movement originated in the state and 84 per cent had its destination there, leaving but an insignificant scattering tonnage from and to points representing more than a purely local movement.

Another point worth mentioning is that while low grade high bulk commodities are a major portion of the rail movement, the truck movement is largely made up of less-than-carload commodities of high value or perishable contents. So that there is little or no conflict over carload shipments. The contest is between less-than-carload express and motor.

### Clue to Future Found in These Studies

An examination of these figures gives us a clue to the future field of freight motor transport in relation to other agencies. Here, in Connecticut, is a developed traffic area where the total highway transport tonnage now probably reaches three and a half million tons a year. It is evident that one-third of that traffic must be simply a haulage from point of origin to a railhead or a purely local delivery. It is evident that two-thirds of that traffic moves less than thirty miles. Of this a larger portion is again to or from railheads and the remainder is a short haul movement, which leading railroad men say should be turned over to the motor truck.

The final item, that above seventy miles, is a minor percentage. Part of it is due to the haulage of special commodities, such as furniture, where packing, handling and breakage charges would make the movement by rail more costly; or again, due to rail embargoes or congestion, which makes the overhead saving in time to the merchant so great as to overcome the primary charge.

### Actual Competition Negligible Factor

From these statements we may reasonably conclude, then, that the actual competition between rail and motor carriers today is negligible and that where it does exist it is largely due to the fact that the rail lines, suffering from undue regulation and cramped beyond reason financially, have been unable to provide desired facilities.

Relief for the railroads from the unprofitable short haul, or rate increases which will make this service pay for itself, seem to offer solutions to their difficulties. Perhaps use of gasoline equipment such as that now employed by forty railroads will serve in many cases.

As for the long haul, the plain fact is that the motor vehicle operator does not want and does not believe in it, save under exceptional conditions and usually these have been forced upon him.

Last year the motor industry, for example, was compelled to drive away from the factories over three hundred thousand motor vehicles for delivery to buyers. Does anyone believe that this was done from choice? Is it not apparent at once that only lack of rail facilities forced an uneconomic movement of this character. Incidentally, does this not show clearly the necessity for a prosperous, efficient rail system?

In the case of passenger travel, perhaps the steam lines would do well to consider long bus operations, especially in scenic country, as a supplement to their rail facilities.

The field of operation in the terminal area appears to be one solution to the question which has not yet been given full consideration.

### Truck Can Serve Public and Rails in Terminals

Responsible railroad executives have said that twenty-five per cent of railroad equipment is absorbed in the haulage of less than five per cent of the commodity movement and that it returns but about ten per cent of the revenue.

This is the less-than-carload movement in which is involved most of the terminal troubles to which the railroad men of the present generation have fallen heir.

Terminal facilities, taken to mean all other than main line facilities, another authority has said, represent about fifty per cent of the total capital investment of the rail lines.

### Present Practice Survival of Horse-drawn Days

Much present railroad practice is a heritage of the horse-drawn days of highway traffic. Then the railroads had to place their stations close together, close to industrial areas, and had to use freight cars over short spurs to facilitate freight movements.

As our cities have grown, the valuations on these terminal properties have swollen to unbelievable proportions, carrying with them enormous increases in fixed and operating expenses. The facilities are no longer adequate, yet to add to them would cost stupendous sums.

Once added, the result would be a congestion of our city streets even worse than that of the present, and at best relief would be but temporary.

### Relief Offered for Congested Traffic Areas

Now consider the alternative. The railroads instead of coming into the center of the city for freight terminals could afford to move them well out, selling their down-town property. Not only would terminal charges be lessened, but the charge to the average merchant would be lower since a trucking movement is necessary anyway, and since his truck could clear more quickly if it did not have to go through crowded city streets or wait for hours at overloaded platforms.

Automatically, such an operation would release thousands of freight cars now used for deliveries to spur lines and the merchant would see his long distance cargoes coming through more quickly, with a resultant decrease in the interest charges on his investment.

City development would be permitted to proceed in a more orderly

fashion, the danger of closed factories, due to delayed shipments of necessities, would be avoided and the wheels of commerce would move more smoothly all along the line.

Passenger traffic does not afford as critical a problem since, as one has put it, "the goods deliver themselves."

### **Completed Transportation Service an Answer**

A store door delivery service furnished by an organization entirely apart from the railroads, which would contract to take the goods from the producer's platform and place them at the gate of the consumer, using the rail or water for the long haul and the truck for the short delivery, seems to be one answer to which we are tending.

If we can progress to this point, then the shipper will have completed transportation involving the shortest length of time for each operation.

He will find his inventories cut down, as he will no longer have to carry huge stocks on hand, the interest on goods in transit will be decreased, fresh goods can be constantly maintained and the greater turnover which naturally follows, of course means a greater profit.

Similarly, the railroad will have its capital charges as well as operation costs reduced and its equipment left free for use in the profitable long haul.

One of the best forms of transportation which we shall see in our day will be the perfection of the unit container system which is now being tested by the New York Central and perhaps other rail lines. This involves the use of a unit body which can be transferred from truck to train, to boat to electric line to truck, without repacking and by a simple crane operation.

### **New Opportunities Given Waterways and Electric Lines**

While most of the points mentioned are applicable to water and electric ways as well as to steam rail and motor movements, if we turn to the waterway, it seems to me that the operation of the truck makes possible new extensions of the field of our waterways. One of these is the vehicle used as a flexible medium of interchange between water and rail-heads. Another is the development of a pick-up and distribution service tying industrial and agricultural areas to inland and coastal shipping points. In an era when every facility is necessary, there is an opportunity for great service in these fields.

The questions of a closer coordination of motor bus and electric line in the serving of urban and interurban passenger traffic have

afforded investors in traction stocks some anxious moments in the past, but the relations in these fields are now generally understood to be complementary rather than competitive and with that point in mind, traction operators are now going into the bus field.

### **Electric Railways Great Purveyors of Mass Transport**

The electric line, either surface or subway, is the present great purveyor of mass transportation in the cities. Differences of opinion have developed among experts as to the future trend of this traffic. What is the field of the bus line on the main thoroughfares of cities? Have London and Paris something to teach us in this respect? It is pertinent here to suggest that in any city the present public utility operating mass passenger transportation should be ever ready to give the public the particular type of service it wants, even though it may call for supplementing its equipment with a new medium. Care must be taken, of course, to protect the public against the evils of either unwise monopoly or too drastic regulation.

It is quite natural that the advent of a new form of transportation should bring with it new problems and obstacles which must be overcome before the public and other transport agencies can reap the full benefit of its use.

When the railroads were first developed, history shows that they were not properly appreciated and it was only as the public came to a realization of their possibilities as carriers that they were accorded full recognition.

### **Barriers to Efficient Transportation for the Public**

The rise of modern highway transport is without parallel in the rapidity with which it has won popular favor, but there still remains much to be done before we can achieve that completed transportation which the public demands.

As one case in point, while we now have some 350,000 miles of improved highway, 259,000 miles of railway, 18,000 miles of interurban electric line and 15,000 miles of inland canals and waterways, none of the older forms of transport can reap the full benefit from highway transport until a much larger percentage of our 2,800,000 odd miles of highway are made ready for constant traffic.

Government surveys in Connecticut, Tennessee, Maryland and elsewhere show conclusively that by far the largest percentage of traffic even over our main highways is purely local. Highways, paralleled by other carriers in many instances but still largely



destined for "feeder" uses, must be improved in every state in order that the rail, water and electric lines shall realize their full volume of travel; and more important, that the public shall derive the benefit of lowered transport charges which logically and naturally follow improved highways.

### **Politics Must Be Eliminated from Highway Work**

At the same time, politics must be eliminated from our highway program and centralized economic and engineering control should determine the order, character, and extent of road improvement upon a basis of future traffic requirements. There should be a definite correlation between interstate, state, county and local systems and the annual highway budget should be adjusted to relative tax needs for other public purposes.

A charge which the public is now subject to is excessive special taxation levied against transportation agencies, which the public as consumers of the commodities must pay.

Thus, for example, a study made from government figures by John E. Walker, formerly tax advisor to the Treasury, shows that the rail lines contributed approximately \$304,000,000 in taxes in 1922.

### **Heavy Discriminatory Levies Paid by Transportation**

Motor users paid special taxes of \$340,000,000 in 1922, or the equivalent of nearly one-half of the total highway construction and maintenance bill of the nation, estimated at \$742,000,000. Of that amount, \$120,000,000 were discriminatory taxes levied by the Federal government and exactly comparable to those railroad taxes which, also growing out of the war, were repealed by a recent session of Congress.

We take no issue with that portion of the remainder expended in the upkeep of highways, as we believe that the user should pay a fair charge for service rendered. But those taxes which are levied for construction or which do not go into highway work at all constitute the payment of general benefits through special levies which add materially to the cost to the public of this form of transportation.

Other large taxes are assessed against the electric lines and other carriers, yet inevitably the consumer must pay. In all these cases, then, we have an artificial barrier imposed in the way of efficient transportation at the lowest cost to the using public.

Inevitably, too, these barriers must be recognized as standing in

the way of the most effective use of the motor by the rail and electric lines.

It seems further that the motor truck and the passenger car must take the place of thousands of miles of short line railroads which were originally built and operated only because the cheaper and more flexible medium was not in existence.

### **Service Must be Given Public All Year 'Round**

At once the question comes up: Can the motor operate the year 'round? The community cannot be left without service. In Connecticut provision is made for removal of snow from the roads and, as in many other states in the winter belt, it is an ordinary item in highway maintenance.

Again, it is apparent that rules and regulations designed to cover old forms of transport cannot always be made to apply to a new form.

For example, there is the question of proper regulation of the motor. Of course, the vehicle should be required to comply with every regulation having to do with the safety of life, limb and property. That is fundamental. Overloading should not be tolerated nor reckless driving. There should be reasonable restrictions to protect the highway, but there should also be a recognition that the highway is of service only as it is used and, accordingly, there should be a proper balance between road and vehicle as well as between vehicle and road.

Proper correlation of traffic is likely also to imply exclusive franchises in return for the regular service which the public has a right to demand.

### **Congestion Increases Costs to Public of All Transport**

Finally, we must take heed from the trend of the times. I have already tried to indicate the far-flung influence of highway transport on our ways of life. We cannot hope to see that influence fully realized unless we make systematic efforts to increase our facilities in our cities as well as in our rural communities.

The evils of congestion in densely populated areas tend to slow down every form of transport and in doing so they stem the flow of people and business to the injury of all transportation and of the public.

There must be extended research and our universities and other educational institutions must train thousands of men for us, if we

are to obtain adequate answers to this highly complex problem of completed transportation.

The responsibility for finding the answer to this question rests with the motor industry, the railroads, the other carriers and the lawmakers.

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But over and above all remains the ever paramount need of conserving the welfare of the public, of the nation, if you please.

We can only attain the desired goal if we keep that need always in mind.

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